

TITLE

APPARATUS AND METHOD FOR INTERFERING WITH PATHOLOGICAL
CELLS SURVIVAL PROCESSES

ABSTRACT

5 A method and an apparatus for interfering with
pathological cells survival processes, i.e. inducing
directly or indirectly apoptosis, on living pathological
cells, by using magnetic fields without adversely affecting
normal cells. Static (S) and extremely low frequency (ELF)
10 magnetic fields are used having low intensity comprised
between 1 and 100 mT, preferably comprised between 1 and 30
mT. In particular SELF fields are used which are different
sequences of S and/or ELF fields, i.e. S fields followed by
ELF fields, ELF fields followed by S fields, S and ELF field
15 together, as well as the presence of S or ELF fields alone,
said ELF fields having a field frequency comprised between 1
and 1000 Hz. An apparatus for carrying out the method
comprises means for generating static magnetic (S) fields
crossing a working environment and/or means for generating
20 electromagnetic extremely low frequency (ELF) fields over
the working environment in addition to the S fields. Means
are provided for modulating the S fields associated to the S
fields generating means and varying the intensity of the S
fields from 1 to 100 mT, preferably between 1 to 30 mT
25 according to a predetermined function. Means may also be
provided for modulating the ELF fields associated to the ELF
fields generating means and imposing to the ELF fields a
frequency between 1 and 1000 Hz with intensity comprised
between 1 to 100 mT, preferably between 1 and 30 mT
30 according to a predetermined function.

09720549 "122200